THE PLANKTON NEWS

THE NEWSLETTER OF THE SOUTHEAST PHYTOPLANKTON MONITORING NETWORK

Volume 3, Issue 1 January 2004

Announcing the Southeast Phytoplankton Monitoring Network!

We are happy to announce that South Carolina Phytoplankton Monitoring Network (SCPMN) has partnered with the SouthEast Center for Ocean Science Education Excellence (SECOSEE) to form the Southeast Phytoplankton Monitoring Network (SEPMN). Our volunteers currently monitor over 50 sampling sites along the South Carolina coast. An additional 10 sites will be added in Georgia. This collaboration will increase knowledge of phytoplankton communities and HABs along the southeast coast.

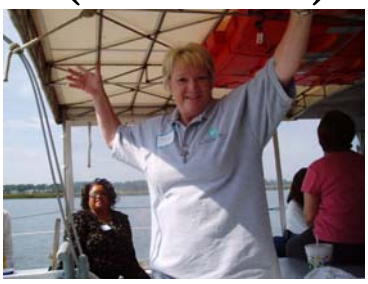
Margaret Olsen, Education Specialist for SECOSEE, will be the main contact person for our Georgia volunteer groups. Margaret recently spent a week at Charleston, South Carolina's Hollings Marine Laboratory learning about SCPMN. She is currently conducting training sessions in Georgia and volunteer data is expected to start pouring in for the New Year. In fact, she already has a waiting list for groups who want to sample along Georgia's coast!

Sites include:

2 sites around St. Mary's
1 site at Jekyll Island
1 site in Brunswick
1 site on St. Simons Island
2 sites near Sapelo Island
1 site between Sapelo and Savannah
2 sites in the Savannah area

In the future, SEPMN hopes to extend its collaboration by welcoming North Carolina contact Terri Kirby Hathoway into the network. Plans are in effect to have Terri as a guest at the Hollings Marine Laboratory in Charleston, South Carolina shortly after the New Year!

Georgia SouthEast Portal to Ocean Research for Teachers (SE-PORT)



On Saturday, October 25th Heather Blankenstein and Lisa Norman attended the SouthEast Portal to Ocean Research for Teachers (SE-PORT) Awareness Day sponsored by the SouthEast Center for Ocean Science Education Excellence (SECOSEE) and the University of Georgia Marine Education Center and Aquarium (MECA). Heather and Lisa introduced a group of 20 Georgia teachers to the Southeast Phytoplankton Monitoring Network and Georgia's new collaboration with the program in hopes they would join as volunteers. The afternoon was spent aboard the *R/V Sea Dawg* vessel exploring the planktonic and benthic communities along the Skidaway River.

INSIDE THIS ISSUE

On-Line Data Entry

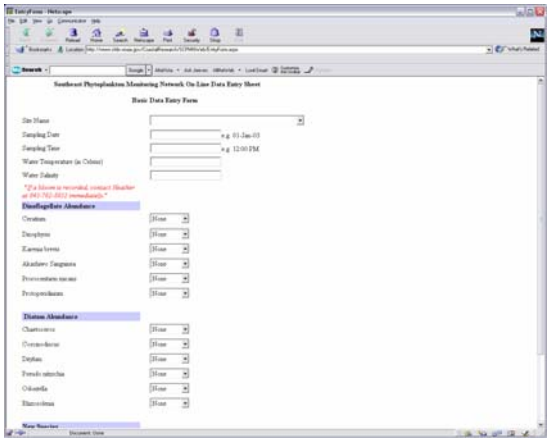
On-Line Data Entry for the Basic and Advanced Data Sheets are now available on the SEPMN website! We have launched this new feature as a direct result of volunteer requests.

We do ask that you **continue submitting your data sheets via email, snail mail, or fax** until we are sure the on-line data entry is functioning properly. Please note on your data sheet if you have submitted your data on-line as well.

Please follow these instructions when submitting data on-line.

1. Visit the SEPMN website at http://www.chbr.noaa.gov/CoastalResearch/SEPMN/
2. Click on the Volunteers section along the top bar.
3. Below the top bar second bar will appear. Click on: Basic On-Line Data Entry or Advanced On-Line Data Entry.
4. Select your Site Name by using the pull down menu.
5. Enter the Sampling Date with the date first, the month (as an abbreviation or number) second, and the year last.
6. Enter the Sampling Time. Be sure to include AM or PM.
7. Enter the Water Temperature in degrees **Celsius**.
8. Enter the Water Salinity in parts per thousand.
9. Next record the abundance of the dinoflagellate and diatom species observed in your sample by using the pull down menu.
10. Record any other species observed and their abundance in the comment box.
11. You may also record any other information in the comment section that you need.
12. Finally, click on the Submit button to submit your data.

Reminder: Please notify SEPMN staff in the case of a bloom.



Second Symposium on Harmful Marine Algae in the U.S.

On December 9th-13th the Second Symposium on Harmful Marine Algae was held at the Marine Biological Laboratory in Woods Hole, Massachusetts. Over 200 scientists and academia were present, 13 from the Marine Biotoxins Program here in Charleston, South Carolina. As part of the Marine Biotoxins team, Heather Blankenstein presented a poster on the former South Carolina Phytoplankton Monitoring Network and the success of volunteer monitoring. With restrictions on funding and hiring, many institutions showed interest in pursuing volunteer based programs.

This was the second of a series of biannual meetings intended to provide a forum for scientific exchange and technical communication on all aspects of marine and estuarine HAB research in the United States. The format included oral presentations, poster sessions, and discussion groups. Topics included new technologies, outreach, mitigation, and regional research. For more information on this conference please visit:

http://www.whoi.edu/redtide/2ndsymposium/

Teaching Materials

General

The Eisenhower National Clearinghouse for Mathematics and Science Education (ENC) is located at The Ohio State University, and is funded through a contract with the U.S. Department of Education. ENC Online is a K-12 math and science teacher center.

http://www.enc.org/

To find examples of lesson plans and classroom materials, click on Lessons & Activities and Science Topics, then choose from a list of science topics or search for something more specific.

Phytoplankton

To learn more about phytoplankton in general, a great guide is available from Marine Science Online Magazine. This article discusses why it is important to study plankton (not just phytoplankton) and would make a great hand-out for students.

http://www.uib.no/ums/magazine/teaching/Plankton/plankton.htm

Calendar of Events

SCMEA
(South Carolina Marine Education Association)
Marsh Madness
Palm Key, South Carolina
March 19th -21st 2004

NMEA
(National Marine Education Association)
Bridge the Gulf: Marine Education in the Sunshine
St. Petersberg, Florida
July 18th-22 2004

Hollings Marine Laboratory SE – PORT
(Southeast Portal on Ocean Research for Teachers)
Charleston, South Carolina
April 17th

Rhizosolenia Bloom In Murrells Inlet

A bloom was reported by the Marion County Master Gardeners group in Murrells Inlet at the Marlin Quay Marina on December 2nd 2003. The group had noticed high numbers of *Rhizosolenia* during the previous week just south of Murrells Inlet at North Pawley's Island. During the week of the 2nd, a golden water discoloration was noted at and samples revealed several species of *Rhizosolenia*. Groups continued to monitor the area during the weeks that followed, and samples showed a decrease in abundance at both sites. Volunteers will continue to monitor this area closely for further bloom events.

Species of *Rhizosolenia* are non-toxic diatoms. Blooms are reported to have caused salmon mortality in British Columbia. Volunteers monitored for fish mortalities during and after the bloom occurred, none were observed.

Photo taken by Master Gardeners Group

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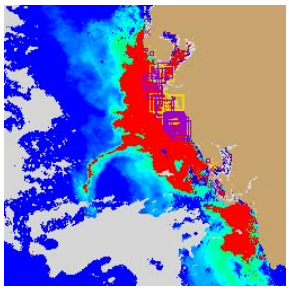
NOAA Uses Remote Sensing Technology to Monitor and Identify HABs



NOAA satellite image of a large K. brevis bloom that occurred on Sept. 17, 2001 from Tampa Bay to Charlotte Harbor.

NOAA scientists are using remote sensing technology to identify, monitor, and predict harmful algal blooms (HABs) in the Gulf of Mexico, on the Florida coast, and in Washington State. Currently the Sea-viewing Wide Field-of-view Sensor (SeaWIFS) is being used to collect data on the color of the ocean. Since phytoplankton contain chlorophyll and other colored pigments, monitoring the color of the ocean offers a way to detect and monitor HABs. This remote sensing technology is used in conjunction with field sampling and will enable scientists to use their resources more efficiently and effectively monitor and forecast estuarine and coastal environmental problems. This in turn will possibly help to minimize the effects of the toxic blooms. To read the full article, please visit the following link: http://www.noaanews.noaa.gov/stories/s2096.htm

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Species Spotlight

Ceratium spp.

Species Introduction

The dinoflagellate *Ceratium* was one of the original species on the SCPMN species list. We have since expanded our advanced data sheet to include three distinct species of *Ceratium*. *Ceratium fusus* is elongated and tapered at both ends. *Ceratium furca* is triangular in shape and has three horns. The two paired horns are unequal in length. *Ceratium longepipes* is shaped like an anchor and has three horns. The two paired horns are long and curve upwards.

Ceratium is not known to be toxic in nature. During blooms, the long horns of this dinoflagellate can damage fish gills. In 1997, a large rock lobster die-off on the West Coast was linked to reduced oxygen levels caused by a massive *Ceratium* bloom.

Who found *Ceratium*?

Early sightings of *Ceratium* were reported in several Mt. Pleasant locations by Wando High School groups. Since Sept 2001, *Ceratium* has been reported on over 127 data sheets from 36 sampling sites along the coast. The highest recorded abundance ratio for *Ceratium* is abundant reported by Fort Dorchester High School in May-June 2003 at their Fort Moultrie site on Sullivans Island.